

State of Wisconsin Motorcycle Safety

2004



Program 04-07 MOTORCYCLE SAFETY

I. GOALS and OBJECTIVES

A. Goal:

To arrest the upward trend of motorcycle riders killed and seriously injured in reportable crashes at 2,010 crashes and 661 killed or seriously injured riders by the end of 2004, and reduce these to 1,950 crashes and 608 seriously killed or injured riders by end of 2007 and 1,800 crashes and 560 killed or seriously injured riders by end of 2009.

1994 Baseline: 826 riders killed or seriously injured in 2,297 crashes

B. Objectives

Objective 1: To decrease the three-year average number of motorcycle crashes to 1,924, and three-year average number of fatalities to 56 for the years 2002-2004

Performance Measure: Annual number of motorcycle crashes and motorcyclists killed as reported on police crash report form, averaged over three years.

Baseline: In CY 1994, 57 motorcycle riders died in 2,297 crashes. Three-year average crashes for CY 1994 - 1996 was 2,059. Three-year average fatalities for 1994 - 1996 was 51.

Status: In CY 2002, 78 motorcycle riders died in 2,184 crashes. The 2000-2002 three-year average is 75 deaths in 2,182 crashes.

Objective 2: To decrease the number of motorcycle crashes, fatalities and injuries in which the rider "had been drinking" to 250 by the end of CY 2004

Performance Measure: Number of motorcycle crashes in which the reporting officer indicates on the crash report that the rider "had been drinking," the number of fatalities and injuries in such crashes.

Baseline: In CY 1994, 354 alcohol-related crashes, 30 fatalities and 420 injuries were reported. The CY 1994-1996 three-year average was 304 crashes, 25 fatalities, and 350 injuries

Status: In CY 2002, 271 alcohol-related crashes, 31 fatalities and 308 injuries occurred.

Objective 3: To decrease the percent of improperly licensed motorcycle riders in fatal crashes to 15% of all Wisconsin riders by the end of CY 2004.

Performance Measure: Number of riders in fatal crashes identified as improperly licensed.

Baseline: In CY 1994, 44% of riders were improperly licensed. 1994-1996 three-year average was 28%.

Status: In CY 2001, 17.1% of riders in fatal crashes were improperly licensed.

C. Related National/State Goals:

Motorcycle Safety Foundation/NHTSA National Agenda for Motorcycle Safety (2002) includes 4 categories of "Urgent" recommendations, 19 categories of "Essential" recommendations, and 13 categories of "Necessary" recommendations. The four "Urgent" categories are: Research in Motorcycle Crashes, Motorcyclist Alcohol & Other Impairment, Personal Protective equipment and Motorist Awareness.

II. ESTIMATED BUDGET

MOTORCYCLE SAFETY 07						
Activity	Title	Fed	State	Local	Tot Prog	Loc Benefit
04-07-01	Program Mgmt	40,000	67,000	20,000	127,000	10,000
04-07-02	PI&E	30,000	2,000	3,000	35,000	15,000
04-07-03	Instructor Training	10,000	3,000	15,000	28,000	5,000
402 TOTAL	(MC)	80,000	72,000	38,000	190,000	30,000
State 461	Rider Education Program	0	654,000	200,000	854,000	654,000
State Total	(461)	0	654,000	200,000	854,000	654,000
TOTAL	ALL FUNDS	80,000	726,000	238,000	1,044,000	684,500

III. PROBLEM IDENTIFICATION and PROGRAM JUSTIFICATION

A. Magnitude and Severity of the Motorcycle Crash Problem

In the United States, motor vehicle injuries are the leading cause of death for persons age 4 to 33 years. Of the 41,821 persons killed in motor vehicle crashes nationally in 2000, 2,862 (7%) were motorcyclists. Of the 3,189,000 persons injured nationally, 58,000 (1.8%) were motorcyclists. Per vehicle mile traveled, a motorcyclist is 18 times more likely to die in a motor vehicle crash and three times more likely to be injured in a crash than a passenger car occupant.

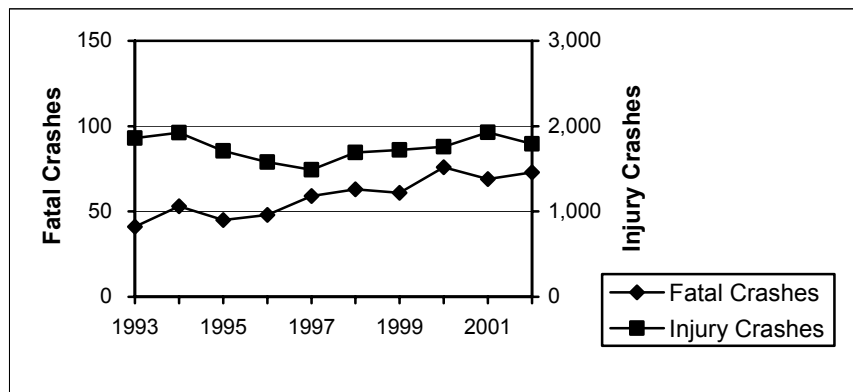
Table 07-01 -- WISCONSIN MOTORCYCLE CRASH DATA 1994-2002											
MOTORCYCLE CRASH EFFECTS	1994	1995	1996	1997	1998	1999	2000	2001	2002	94--96 3-yr av	00-02 3-yr av
Motorcycle Crashes	2,297	2,057	1,823	1,760	1,989	2,012	2,078	2,283	2,189	2,059	2,182
Motorcyclists Killed	57	47	50	63	65	65	78	70	78	51	75
Motorcyclists Injured	2,208	1,963	1,834	1,701	1,925	1,965	2,014	2,165	2,049	2,002	2,076
Motorcyclist A-Injuries	769	615	559	527	577	578	614	666	583	648	621
Total K + A	826	662	609	590	631	643	692	736	661	699	696

Source: WisDOT Crash Database

Motorcyclists are disproportionately killed and injured when involved in crashes in Wisconsin, as well. In 2002, 78 motorcyclists and 4 moped riders died. Motorcycle crashes represented 1.7% of all traffic crashes; motorcyclists and motorcycle passengers killed represented 9.7% of all motor vehicle fatalities and injured motorcyclists represented 3.5% of all motor vehicle injuries.

Compared with many other states, Wisconsin has a relatively short riding season, but its good roads, its welcoming attitude toward individuals and groups of riders, as well as its 'mystique' as home of Harley-Davidson, and the amelioration of its winter weather during the past few years has resulted in deaths now occurring during every month of the year.

Graph 07-02 Fatal and Injury Motorcycle Crashes 1993-2002



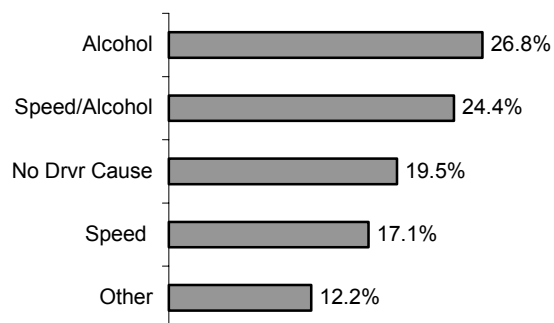
While motorcycle injury crashes have been on a fairly steady decline since 1985, the trend reversed in 1997, and the corresponding decline in fatalities began an upward trend in 1995 and the number has nearly doubled in fewer than 10 years.

B. Risk Factors for Crash Involvement and Injury

Each year, the WisDOT prepares a *Wisconsin Motorcycle Safety Facts Book*. This book provides detailed information on motorcyclists and motorcycle registrations, fatalities and injuries, and causal and location factors in motorcycle crashes. In 2000, alcohol, speed and combined alcohol-speed continued to be primary factors in single-unit motorcycle fatal crashes.

Figure 07-03

2001 Single Unit Motorcycle Fatal Crashes Primary Contributing Factor



Low Helmet Use

Wisconsin law mandates helmet use by riders and passengers under age 18 and riders operating with a cycle instructional permit. All riders are required to wear eye protection. According to a 1994 roadside survey, helmet use averages 44% statewide. Of Wisconsin's 78 fatalities in 2002, only 19.2% were wearing safety helmets. Of Wisconsin's 2,049 injured riders only 31% were wearing safety helmets.

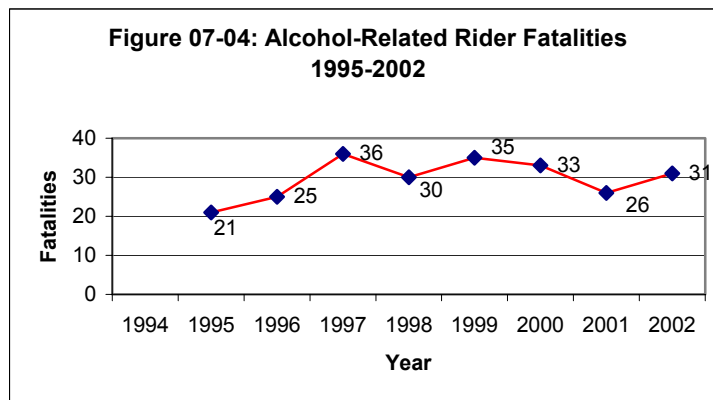
Linked crash and hospital data for 1994-1999 produced by the Wisconsin CODES Project identified 494 brain injuries for unhelmeted hospitalized riders and 54 brain injuries for helmeted-

hospitalized riders. In 2000, CODES data showed that of 1617 persons injured in motorcycle crashes, 1096 were not helmeted and of these, 57 died and 351 were hospitalized, 80 with a brain injury. Of the 4,012 who wore helmets and were injured, 15 died and 103 were hospitalized, 11 with brain injury.

In an extensive 1996 study of helmet use and hospitalizations, the Wisconsin CODES Project determined that persons not wearing helmets and involved in a motorcycle crash are almost five times as likely to have a traumatic brain injury hospitalization as persons wearing a helmet. In 1996, while almost 9% of traumatic brain injury hospitalizations for unhelmeted riders resulted in death, no deaths occurred for hospitalized riders who were wearing a helmet.

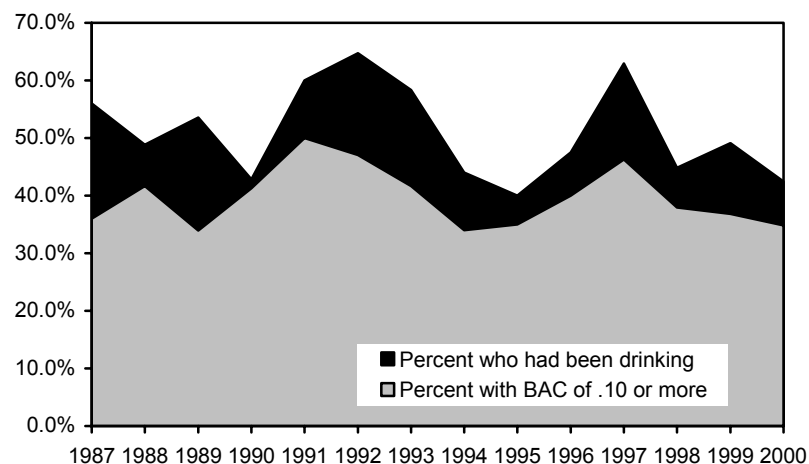
Alcohol

In 2002, 271 (14 %) of motorcycle crashes were alcohol-related, and 31 (46%) of the riders in these crashes were killed and 308 (15%) were injured.



This graph illustrates an upward trend in the number of alcohol-related fatalities since 1995. The following graph illustrates the percent of fatalities that were coded as had been drinking or had a tested alcohol concentration of greater than the legal limit.

**FIGURE 07-05: Motorcycle Rider Fatalities 1987-2000
Had Been Drinking and BAC Greater Than 0.10**



Source: Alcohol Crash Facts 2000

Of the 9,299 unhelmeted riders in crashes during 1994-1999, the Wisconsin CODES Project discovered that alcohol was involved in 1,569 of the cases and of the 3,974 helmeted riders in crashes during this period, alcohol was involved in 148 of the cases. In 2000, 907 (83%) of the 1096 unhelmeted and injured motorcyclists were in alcohol-related crashes, and of these 34 died. Fourteen of the riders wearing helmets were in alcohol-related crashes, and of these 3 died.

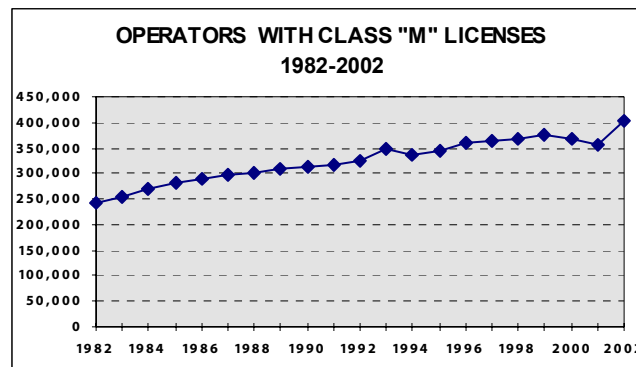
Rider Age

While most motor vehicle-related deaths have trended downwards in Wisconsin and nationally, motorcycle fatalities were on the increase during the last decade. Most recently, motorcyclist deaths are increasing most among riders age 40 and older; nationally, deaths in this age group increased more than 150% during the 1990's. According to the Insurance Institute for Highway Safety, the main reason for this upward trend is that more older people are purchasing and riding motorcycles.

Improper Licensing

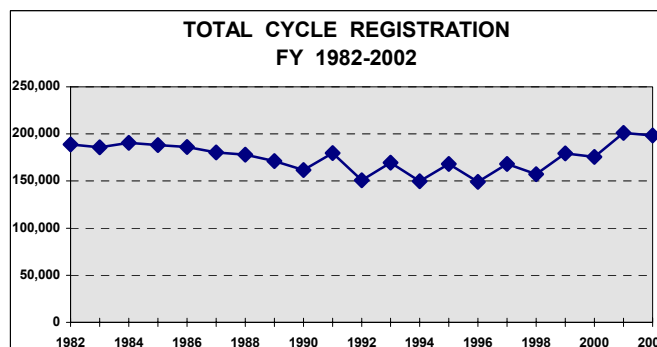
Unlicensed or improperly licensed riders were involved in an average of 28% of motorcycle fatal crashes in 1994 through 1996. In 2001, 18.1% of motorcyclists involved in fatal crashes and 17.1% of riders who died were not licensed or were improperly licensed at the time of the crash.

Figure 07-06



In 2002, 404,730 WI riders had regular or probationary Class "M" Motorcycle licenses. Chart 07- 06 shows that the number of licensed riders has increased steadily throughout the past two decades. Today Wisconsin licenses 66% more riders than in 1982.

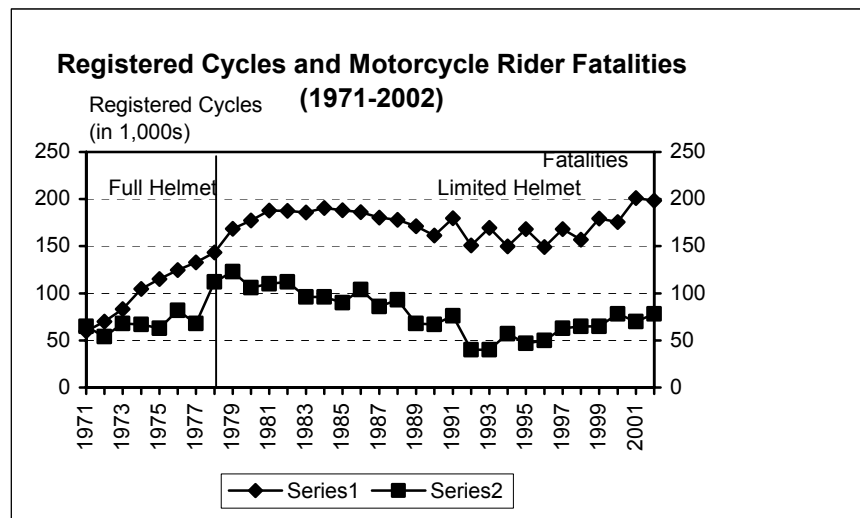
Figure 07-07



In 2002, 198,495 motorcycles were registered in Wisconsin. Chart 07- 07 shows that registration of motorcycles decreased for much of the 90s, but has trended relatively sharply up in the past four years. In fact, Wisconsin registers 25% more cycles than just five years ago. This agrees with national data.

The following chart relates the number of registered motorcycles (in 100,000s) with the number of fatalities. While the number of cycles remained relatively steady for many years, the number of fatalities trended downward until the mid-nineties.

Figure 07-08: REGISTERED CYCLES AND FATALITIES 1971-2002



Inadequate Training and/or Experience

According to the nationally recognized 1970 "Hurt Study," of motorcycle crash risk: "...Motorcycle riders involved in accidents are essentially without training; 92% were self-taught or learned from family or friends. Motorcycle riders in these accidents showed significant collision avoidance problems. Motorcycle rider training experience reduces accident involvement and is related to reduced injuries in the event of accidents." However, some more recent contradictory evidence suggests that riders, like drivers, who have undergone brief skills training misperceive their capabilities and are more likely to take risks.

Collisions with Deer

A major concern of Wisconsin motorists--both motorcyclists and others--is deer, which are a factor in one of every seven motor vehicle crashes. In 2000, 80.2% of motorcycle-deer crashes resulted in a fatality or injury to the cyclist. No countermeasures exist except rider knowledge of deer behavior and increased watchfulness in high-risk areas and at times when deer are most likely to be present.

IV. STRATEGIES FOR DECREASING DEATHS & INJURIES

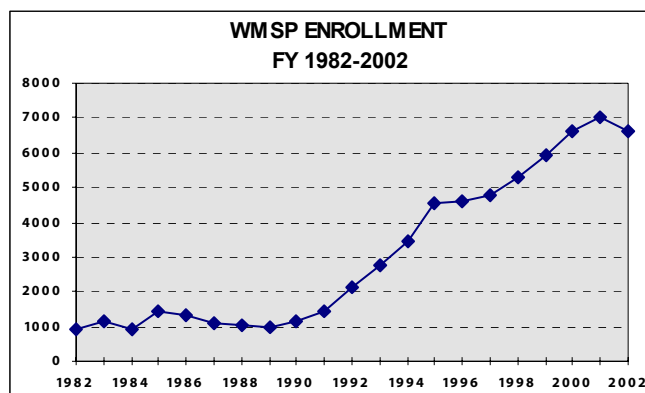
Education – Training

Wisconsin has elected to pursue rider education as its primary strategy to decrease motorcycle crash-related injuries and deaths and to address the high-risk behaviors and groups identified above. Many collision-avoidance skills are taught and experienced on bikes. Wisconsin's state-funded Motorcycle Rider Education Program (MREP) Basic Course graduates have increased from 450 in 1981 to 6,263 in 2001, and 6,617 were enrolled in the summer 2002 season. Experienced Rider Course graduates increased from 40 in 1982 to 603 in 2001, the last year the course was offered. Federal funds are used to upgrade the training skills of the MREP instructors and to support program administration.

Wisconsin plans to hold a summit meeting of key organizations and governmental agencies to encourage and plan for the local implementation of the NHTSA/MSF National Agenda for Motorcycle Safety (NAMS). NAMS is a blueprint for motorcycle safety in the United States. The report addresses the status of motorcycling today and where we want to be in the future and provides insights on how to get there. It suggests activities for state and local governments and for many motorcycling and non-motorcycling organizations. A summit will serve as a first step in statewide implementation of NAMS.

Wisconsin implemented the new MSF Basic Rider Course (BRC) in 2002 and 2003. Rider Coaches (instructors) must be carefully refreshed to make sure that the new curriculum is being delivered properly. Also, a new MSF Experienced Rider Course (ERC) will be released sometime this summer and we need to update Rider Coaches on how to conduct this new course. Refresher and updates will be conducted as needed during the fall of 2003 and spring of 2004.

**Figure 07-09 Wisconsin Motorcycle Safety Program (WMSP)
Rider Education Class Enrollment 1982-2002**



Public Information

Federal funds support the development, duplication and distribution of public information and education materials that support training and that address the primary safety issues for

motorcyclists. 2001 Motorcycle Safety Foundation award-winning materials address training, licensing, protective gear, alcohol-impaired riding, work zone hazards and moped safety.

Evaluation

In 2000, Wisconsin underwent a NHTSA Motorcycle Program Assessment. The Technical Assistance Team was impressed with the quality of Wisconsin's program:

"...there is a well-respected and recognized leadership system in place to address current and emerging challenges concerning motorcycle safety in the state....Wisconsin's program is very comprehensive and has involved a broad spectrum of people, organizations, and government entities in program management, licensing, rider education, and public information and education.

The state Motorcycle Safety Advisory Committee (MOSAC) has met twice to discuss implementing the Assessment Team's major recommendations as well as implementing the recommendations of the National Agenda for Motorcycle Safety. No formal strategic planning process is underway, but MOSAC is making recommendations for developing program goals and objectives, the on-going evaluation process and annual formal program review. Public information materials encouraging use of protective gear were developed and are now widely available.

V. ACTIVITIES and ESTIMATED FUNDING by STRATEGY

STRATEGY -- ADMINISTRATION

Activity: 04-07-01-MC ADMINISTRATIVE SUPPORT.

Problem: State-funded Motorcycle Rider Education Program requires full-time clerical assistance to maximize the state resources made available in the 2001-2003 Budget.

Objective:

1. To assist the Program Manager in the delivery of an enlarged rider education program.
2. To provide clerical support for BOTS: Produce forms, spreadsheets, correspondence, documents, contracts, etc., as required.
3. Handle 800 number and other MC program phone calls.

Resources: \$40,000 for 1.0 FTE wage, fringe, DP, training, M&S.

Self-sufficiency: Need for this level of support will be reevaluated, as program enlarges. State support in 2002 was \$65,000 for program manager and \$589,000 for program delivery.

Evaluation: Administrative evaluation of level of activity and output.

Activity: Wisconsin MOTORCYCLE RIDER EDUCATION PROGRAM MANAGEMENT State Approp. 461

Problem: State-funded Motorcycle Rider Education Program requires full-time administrator specified in State Statute and administrative code.

Objective: To coordinate and manage the Motorcycle Rider Education Program and all other state-level motorcycle safety activities.

Resources: \$80,000 for 1.0 FTE wage, fringe, DP, training, M&S.

Self-sufficiency: This is a statutorily mandated and funded position.

Evaluation: Administrative evaluation of level of activity and output.

STRATEGY -- EDUCATION -- Public Information & Education

Activity: 04-07-02-MC MOTORCYCLE SAFETY PUBLIC INFORMATION

Problem: Five program messages must be communicated to the appropriate target audiences: "Get Trained," "Get Licensed," "Gear Up," "Ride Sober," and "Share the Road." Existing program materials were developed in the past three years.

Objective: Market research, design campaign messages and materials to disseminate all five messages, ascertain baseline KAB for each message and develop plan for analysis of effectiveness. The purpose of which is to:

1. Increase interest in training and therefore increase class size by 10% by 2004.
2. Reduce impaired riding and alcohol-related crashes by 10% by 2004.
3. Stop upward trend and reduce annual motorcyclist deaths and injuries by 8% by 2004.
4. Reach 60% of the targeted audiences with these materials.

Resources: \$ 30,000 for duplication and distribution of materials.

Self-sufficiency: All materials will be available for free duplication.

Evaluation: BOTS PI&E Evaluation ascertain baseline KAB for each message and develop plan for analysis of effectiveness in reaching target audiences and in affecting KAB.

STRATEGY -- EDUCATION -- Training

Activity: 04-07-03-MC MOTORCYCLE SAFETY INSTRUCTOR TRAINING

Problem: State-funded Motorcycle Rider Education Program requires instructors who meet national and state training standards to provide Wisconsin riders with the most current information and training methods and to maximize the value of the training. Little implementation of the National Agenda for motorcycle Safety has yet occurred in WI. Regional and/or state workshops can keep instructors and chief instructors current on national curriculum issues.

Objective:

1. To involve up to 85% of Wisconsin Motorcycle Safety Instructors in annual Instructor Refresher Workshops to update instructors in the new MSF National Curriculum being implemented statewide in 2003. Sponsor up to 3 regional meetings, or one state conference for Instructors.
2. Provide scholarships for up to 4 Chief Instructors to attend National SMSA/MSF Conference in 2004.
3. Kick off Implementation of the MSF/NHTSA National Agenda for Motorcycle Safety through a state summit in which members of agencies and organizations plan a 2-yr implementation strategy.

Resources: \$10,000 for wage, travel, meals, incentives.

Self-sufficiency: Instructors will see benefit and attend future conferences at own expense.

Evaluation: Administrative evaluation. Compare quality of instruction over several years using on-site visits.

**Activity: WISCONSIN MOTORCYCLE RIDER EDUCATION PROGRAM – *State
Approp. 461***

Problem: State-funded Motorcycle Rider Education Program

Objective: To enroll 8,000 riders in the Basic Rider Course (MRC:RSS) and 400 riders in the Experienced Rider Course (ERC) during the 2003 training season, given adequate funding.

Resources: \$376,000 for grants to sites delivering training, M&S.

Self-sufficiency: This is a statutorily-mandated and funded program.

Evaluation: Administrative evaluation. Number of students served, quality of instruction, survey KAB of instructors and students, trends in crashes, citations, deaths and injuries.